

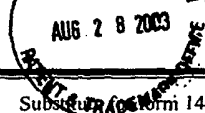
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Subsidiary Form 1449A/PTO

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet		of	Complete if Known	
Application Number		09/888,264		
Filing Date		June 22, 2001		
First Named Inventor		Sean H. Adams, <i>et al.</i>		
Group Art Unit		1635		
Examiner Name		Jon E. Angell		
Attorney Docket Number		09800080-0003		
OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	CiteNo.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog <i>etc.</i> ), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
	C39	Tisdale, M., "Cancer Cachexia: Metabolic Alterations and Clinical Manifestations," <i>Nutrition</i> , 13:1-7 (1997) (complete reference herewith submitted).		

Examiner Signature	Date Considered 9-30-03
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14329541/v1

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<sup>1</sup> Unique citation designation number. <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

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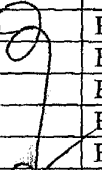
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Sheet	1	of	5	Filing Date	June 22, 2001
				First Named Inventor	Sean H. Adams, et al.
				Group Art Unit	1635
				Examiner Name	Jon E. Angell
				Attorney Docket Number	09800080-0003

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code <sup>2</sup> (if known)			
	A1	5,364,934		D. Drayna, et al.	11-15-1994	
	A2	6,132,973		P. Lal, et al.	10-17-2000	

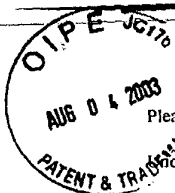
FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. <sup>1</sup>	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Office <sup>3</sup>	Number <sup>4</sup>	Kind Code <sup>5</sup> (if known)				
	B1		WO 99/00123	A1	P. Lind, <i>et al.</i>	01-07-1999		
	B2		WO 99/64458	A1	B. Corkey, <i>et al.</i>	12-16-1999		
	B3		WO 00/04037	A1	K. Albrandt, <i>et al.</i>	01-27-2000		
	B4		WO 00/61614	A2	S. Ruben, <i>et al.</i>	10-19-2000		
	B5		WO 01/98355	A2	D. Lewin, <i>et al.</i>	12-27-2001		
	B6		WO 01/98512	A2	S. Adams, <i>et al.</i>	12-27-2001		

Examiner Signature		Date Considered	9-30-03
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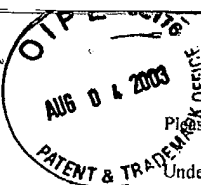
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Substitute for form 1449A/PTO				Complete if Known	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				Application Number	09/888,264
				Filing Date	June 22, 2001
				First Named Inventor	Sean H. Adams, <i>et al.</i>
				Group Art Unit	1635
				Examiner Name	Jon E. Angell
Sheet	2	of	6	Attorney Docket Number	09800080-0003
<b>OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS</b>					
Examiner Initials*	CiteNo.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T <sup>2</sup>
	C1	Adams, S., "Uncoupling Protein Homologs: Emerging Views of Physiological Function," <i>J Nutr.</i> 130:711-714 (2000).			
	C2	Boss, O., S. Samec, A. Paoloni-Giacobino, C. Rossier, <i>et al.</i> , "Uncoupling protein-3: a new member of the mitochondrial carrier family with tissue-specific expression," <i>FEBS Letters</i> , 408:39-42 (1997).			
	C3	Bouillaud, F., D. Ricquier, J. Thibault, and J. Weissenbach, "Molecular Approach to Thermogenesis in Brown Adipose Tissue: cDNA Cloning of the Mitochondrial Uncoupling Protein," <i>Proc. Natl. Acad. Sci.</i> , 82(2):445-448 (1985).			
	C4	Brand, M., L. Chien, E. Ainscow, D. Rolfe, <i>et al.</i> , "The causes and functions of mitochondrial proton leak," <i>Biochim. Biophys. Acta.</i> , 1187:132-139 (1994).			
	C5	Bray, G., "Progress in Understanding the Genetics of Obesity." <i>J Nutr.</i> , 127:940S-942S (1997).			
	C6	Carter, P., H. Bedouelle, and G. Winter, "Improved oligonucleotide site-directed mutagenesis using M13 vectors," <i>Nucl. Acids Res.</i> , 13:4431-4443 (1985).			
	C7	Cassard, A., F. Bouillaud, M. Mattei, E. Hentz, <i>et al.</i> , "Human Uncoupling Protein Gene: Structure, Comparison With Rat Gene, and Assignment to the Long Arm of Chromosome 4," <i>J. Cell Biochem.</i> , 43:255-264 (1990).			
	C8	Choithia, C., "The Nature of the Accessible and Buried Surfaces in Proteins," <i>J. Mol. Biol.</i> , 105:1-14 (1976).			
	C9	Creighton, "Posttranslational Covalent Modifications of Polypeptide Chains," in "Proteins: Structure and Molecular Properties," (W.H., Freeman & Co.) (San Fran., CA), pp. 78-86 (1983).			

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## INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 3 of 6

### Complete if Known

Application Number	09/888,264
Filing Date	June 22, 2001
First Named Inventor	Sean H. Adams, et al.
Group Art Unit	1635
Examiner Name	Jon E. Angell
Attorney Docket Number	09800080-0003

### OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS

C10	Cunningham, B. and J. Wells, "High-Resolution Epitope Mapping of hGH-Receptor Interactions by Alanine-Scanning Mutagenesis," <i>Science</i> , 244:1081-1085 (1989).
C11	Fleury, C., M. Neverova, S. Collins, S. Raimbault, et al., "Uncoupling protein-2: a novel gene linked to obesity and hyperinsulinemia," <i>Nat. Genet.</i> , 15:269-272 (1997).
C12	Gimeno, R., M. Dembski, X. Weng, N. Deng, et al., "Cloning and Characterization of an Uncoupling Protein Homolog. A Potential Molecular Mediator of Human Thermogenesis," <i>Diabetes</i> , 46:900-906 (1997).
C13	Goldstein, S. and D. Elwyn, "The effects of injury and sepsis on fuel utilization," <i>Annu. Rev. Nutr.</i> , 9:445-473 (1989).
C14	Gong, D., Y. He, M. Karas, and M. Reitman, "Uncoupling Protein-3 Is a Mediator of Thermogenesis Regulated by Thyroid Hormone, $\beta$ 3-Adrenergic Agonists, and Leptin," <i>J. Biol. Chem.</i> , 272(39):24129-24132 (1997).
C15	Gura, T., "Uncoupling Proteins Provide New Clue to Obesity's Causes," <i>Science</i> , 280:1369-1370 (1998).
C16	Hill, J. and J. Peters, "Environmental Contributions to the Obesity Epidemic," <i>Science</i> , 280:1371-1374 (1998).
C17	Iacobazzi, V., et al. GenBank Accession No. NM_003562 (1992).
C18	Iacobazzi, V., F. Palmieri, M. Runswick, and J. Walker, "Sequences of the human and bovine genes for the mitochondrial 2-oxoglutarate carrier," <i>DNA Seq.</i> , 3(2):79-88 (1992).
C19	Jacobsson, A., U. Stadler, M. Glotzer, and L. Kozak, "Mitochondrial Uncoupling Protein from Mouse Brown Fat," <i>J. Biol. Chem.</i> , 260(30):16250-16254 (1985).
C20	Ježek, P., H. Engstova, M. Zackova, A. Vercesi, et al., "Fatty acid cycling mechanism and mitochondrial uncoupling proteins," <i>Biochim. Biophys. Acta.</i> , 1365:319-327 (1998).
C21	Kallol, D., R. Lewis, T. Combatsiaris, Y. Lin, et al., "Predominant expression of the mitochondrial dicarboxylate carrier in white adipose tissue," <i>Biochem. J.</i> , 344:313-320 (1999).
C22	Kinney, J., J. Duke, Jr., C. Long, and F. Gump, "Tissue fuel and weight loss after injury." <i>J. Clin. Path.</i> , 23(4):65-72 (1970).

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Substitute for form 1449A/PTO				<b>Complete if Known</b> Application Number 09/888,264 Filing Date June 22, 2001 First Named Inventor Sean H. Adams, et al. Group Art Unit 1635 Examiner Name Jon E. Angell Attorney Docket Number 09800080-0003	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)					
Sheet	4	of	6		
<b>OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS</b>					
	C23	Lai, C., C. Chou, L. Ch'ang, C. Liu, and C. Liu, et al., GenBank Accession No. AF151827 (2000).			
	C24	Lai, C., C. Chou, L. Ch'ang, C. Liu, and W. Lin, "Identification of Novel Human Genes Evolutionarily Conserved in <i>Caenorhabditis elegans</i> by Comparative Proteomics," <i>Genome Res.</i> , 10:703-713 (2000).			
	C25	Mao, W., X. Yu, A. Zhong, W. Li, et al. "UCP4, a novel brain-specific mitochondrial protein that reduces membrane potential in mammalian cells," <i>FEBS Lett.</i> 443:326-330 (1999).			
	C26	Must, A., J. Spadano, E. Coakley, A.E. Field, et al. "The Disease Burden Associated With Overweight And Obesity." <i>JAMA.</i> , 282:1523-1529 (1999).			
	C27	Nicholls, D. and R. Locke, "Thermogenic Mechanisms in Brown Fat," <i>Physiol. Rev.</i> , 64:1-64 (1984).			
	C28	Palmieri, F., F. Bisaccia, L. Capobianco, V. Dolce, et al., "Transmembrane Topology, Genes, and Biogenesis of the Mitochondrial Phosphate and Oxoglutarate Carriers," <i>J. Bioenerg. Biomemb.</i> , 25(5)493-501 (1993).			
	C29	Palmisano, A., V. Zara, A. Hönlinger, A. Vozza, et al., "Targeting and assembly of the oxoglutarate carrier: general principles for biogenesis of carrier proteins of the mitochondrial inner membrane," <i>Biochem J.</i> 333:151-158 (1998).			
	C30	Piccininni, S., V. Iacobazzi, G. Lauria, M. Rocchi, and F. Palmieri, "Assignment of the oxoglutarate carrier gene (SLC20A4) to human chromosome 17p13.3," <i>Cytogenet. Cell Genet.</i> , 83:256-257 (1998).			
	C31	Poutska, A., M. Klein, H. Mewes, J. Gassenhuber, and S. Wiemann, GenBank Accession No. AL133584 (1999).			
	C32	Ricquier, D., L. Casteilla, and F. Bouillaud, "Molecular studies of the uncoupling protein," <i>FASEB J.</i> 5:2237-2242 (1991).			
	C33	Rolfe, D., A. Hulbert, and M. Brand, "Characteristics of mitochondrial proton leak and control of oxidative phosphorylation in the major oxygen-consuming tissues of the rat," <i>Biochim. Biophys. Acta.</i> , 1118:405-416 (1994).			
	C34	Rolfe, D., J. Newman, J. Buckingham, M. Clark, et al. "Contribution of mitochondrial proton leak to respiration rate in working skeletal muscle and liver and to SMR," <i>Am. J. Physiol.</i> , 276:C692-C699 (1999).			
	C35	Runswick, M., J. Walker, F. Bisaccia, V. Iacobazzi, and F. Palmieri, GenBank Accession No. AAA30672 (1990).			

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# **INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

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Sheet 5 of 6

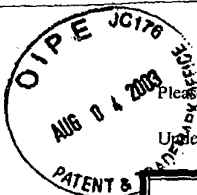
## **Complete if Known**

Application Number	09/888,264
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First Named Inventor	Sean H. Adams, et al.
Group Art Unit	1635
Examiner Name	Jon E. Angell
Attorney Docket Number	09800080-0003

## **OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS**

C36	Sanchis, D., C. Fleury, N. Chomiki, M. Gubern, et al., "BMCP1, a Novel Mitochondrial Carrier with High Expression in the Central Nervous System of Humans and Rodents, and Respiration Uncoupling Activity in Recombinant Yeast," <i>J. Biol. Chem.</i> , 273(51):34611-34615 (1998).
C37	Shimkets, R., D. Lowe, J. Tai, P. Sehl, et al., "Gene expression analysis by transcript profiling coupled to a gene database query," <i>Nat. Biotechnol.</i> , 17:798-803.
C38	Solanes, G., A. Vidal-Puig, D. Grujic, J. Flier, and B. Lowell, "The Human Uncoupling Protein-3 Gene," <i>J. Biol. Chem.</i> , 272(41):25433-25436 (1997).
C39	Tisdale, M., "Cancer Cachexia: Metabolic Alterations and Clinical Manifestations," <i>Nutrition</i> , 13:1-7 (1997) (page 7 is currently unavailable from publisher).
C40	Vidal-Puig, A., G. Solanes, D. Grujic, J. Flier, et al., "UCP3: An Uncoupling Protein Homologue Expressed Preferentially and Abundantly in Skeletal Muscle and Brown Adipose Tissue," <i>Biochem. Biophys. Res. Comm.</i> , 235:79-82 (1997).
C41	Walker, J. and M. Runswick, "The Mitochondrial Transport Protein Superfamily," <i>J. Bioenerg. Biomemb.</i> , 25(5):435-446 (1993).
C42	Wells, J., M. Vasser, and D. Powers, "Cassette mutagenesis: an efficient method for generation of multiple mutations at defined sites," <i>Gene</i> , 34:315-323 (1985).
C43	Wells, J., B. Cunningham, T. Graycar, and D. Estell, "Importance of Hydrogen-Bond Formation in Stabilizing the Transition State of Subtilisin," <i>Philos. Trans. R. Soc. London Ser. A.</i> , 317:415-423 (1986).
C44	Wolf, G., "A New Uncoupling Protein: A Potential Component of the Human Body Weight Regulation System," <i>Nutr. Rev.</i> , 55:178-179 (1997).
C45	Yu, X., J. Barger, B. Boyer, M. Brand, et al., "Impact of endotoxin on UCP homolog mRNA abundance, thermoregulation, and mitochondrial proton leak kinetics," <i>Am. J. Physiol. Endocrinol. Metab.</i> 279:E433-E446 (2000).
C46	Yu, X., W. Mao, A. Zhong, P. Schow, et al., "Characterization of novel UCP5/BMCP1 isoforms and differential regulation of UCP4 and UCP5 expression through dietary or temperature manipulation." <i>FASEB J.</i> , 14:1611-1618 (2000).
C47	Zhang, C., T. Hagen, V. Mootha, L. Sliker, and B. Lowell, "Assessment of uncoupling activity of uncoupling protein 3 using a yeast heterologous expression system," <i>FEBS Lett.</i> , 449:129-134 (1999).

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				First Named Inventor	Sean H. Adams, et al.
				Group Art Unit	1635
				Examiner Name	Jon E. Angell
Sheet	6	of	6	Attorney Docket Number	09800080-0003
<b>OTHER ITEMS - NON PATENT LITERATURE DOCUMENTS</b>					
	C48	Zoller, M. and M. Smith, "Oligonucleotide-directed mutagenesis using M13-derived vectors: an efficient and general procedure for the production of point mutations in any fragment of DNA," <i>Nucl. Acids Res.</i> , 10:6487-6501 (1982).			

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Examiner Signature		Date Considered	9-30-02
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